## MEMORANDUM OF UNDERSTANDING

## FOREST MANAGEMENT DIVISION

## MICHIGAN DEPARTMENT OF NATURAL RESOURCES

and

FORESTRY DEPARTMENT-MICHIGAN STATE UNIVERSITY

(JACK PINE REGENERATION)

THIS AGREEMENT is by and between the Forest Management Division, Michigan Department of Natural Resources (hereinafter called the Forest Management Division) and Michigan State University.

WHEREAS, the Forest Management Division has received an appropriation of funds to be used for the cultivation and management of forest stands located on dedicated State Forest lands for the purpose of maximizing the growth and continuing productivity of timber products, and

WHEREAS, the efficient and effective use of these funds requires the application of practices in conformance with methods determined through research to have the highest degree of effectiveness, and the scientific analysis and evaluation of the results of practices installed, and

WHEREAS, the Michigan State University Department of Forestry has conducted research, and has the capability for performance of this function, and

WHEREAS, the performance of such functions by the Department of Forestry will fulfill Forest Management Division needs not presently within its capability, and at the same time further the forestry education and research program of the Department of Forestry.

NOW THEREFORE, the parties herto mutually agree:

The Michigan State University, Department of Forestry will:

- Conduct a comprehensive literature review on the regeneration of jack pine, the factors that may be limiting regeneration of jack pine, and the management techniques which can be implemented to overcome the limiting factors.
- 2. Develop criteria to determine which sites should be directseeded with jack pine, and which sites should be planted to jack pine. These criterias will be formulated as guidelines that can be easily learned and used by field personnel.
- Determine the factors relating to success and failures of jack pine regneration efforts throughout the Grayling/ Roscommon area.
- 4. Assume responsibility, costs, damages, or expense arising out of death or injury to any person or damage to property caused or occasioned by the performance of services herein contracted for, and further shall protect and defend the State of Michigan or any of its authorized agents against all claims whatsoever, and to hold the State of Michigan or its agents harmless from any loss or damage resulting therefrom. This provision should not be construed as being applicable to liability for damages arising out of bodily injury to persons or damage to property caused by or resulting from the sole negligence of the State, its agents or employees.

The Forest Management Division will:

- 1. Provide records of past planting and seeding areas.
- 2. Permit destructive stem analysis in selected stands.
- 3. Pay to the Department of Forestry the amount of \$18,150 upon submission of a final report satisfactorily fulfilling the above provisions.

The amount of \$8,450 shall be advanced upon execution of this agreement, and the balance upon receipt of the final report documenting findings and accomplishments.

4. Provide an interim progress report on or about September 30, 1979.

Unless otherwise extended, this agreement shall terminate September 30, 1980. This agreement or any modification thereto motice to the other. In this event, payment shall be based on actual expeditures as of the date of termination. IN WITNESS THEREOF, the parties have executed the Agreement as of the date shown below.

FOREST MANAGEMENT DIVISION MICHIGAN DEPARTMENT OF NATURAL RESOUR

Chief, Frest Management Division

6-5-79

DEPARTMENT OF FORESTRY
MICHIGAN STATE UNIVERSITY

by

STEPHEN 11. TERRY
Assistant Vice President for Finance

JUN 14 1979

(date)